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International Spectrum Engagement

By Steve Ward and Thomas Kidd - October-December 2010

The Department of the Navy's (DON) engagement in the United States spectrum regulatory environment has been discussed in previous articles. However, the DON has many facilities and operations that are not under the umbrella of domestic regulation. The complexity of acquiring spectrum access for these situations increases and is often multiplied when Navy and Marine Corps operations are located within, or even transiting, foreign nations. As a result, the DON is globally engaged with various multinational organizations to accommodate the international presence of our naval forces and to nurture the availability of spectrum resources.

Internationally, many organizations impact spectrum availability. Some are obvious, such as the United Nations International Telecommunications Union (ITU) Radiocommunications Sector (ITU-R), while others may not be as apparent, but they are still critical to DON spectrum access. To better acquaint CHIPS readers with the DON Chief Information Officer's (CIO) sphere of engagement, a list of several of the organizations in which the DON actively participates and contributes to enhance access to spectrum follows.

Combatant Commands

A July 2008 CHIPS article titled "Military Coalition Frequency Management" offered some background on the environment in U.S. European Command and the DON's coordination with the North Atlantic Treaty Organization (NATO) members. While the combatant commands have similarities, their policies, guidance and procedures for spectrum usage vary significantly due to differences in area of responsibility. Each combatant command has a structure to act as an emissary to sovereign nations in its area of responsibility to synchronize spectrum access.

Spectrum planning for naval operations in multiple geographic areas in a single deployment is a challenge. Operational engagement with the geographic combatant commanders is invaluable in managing these challenges.

Multinational Military Organizations

North Atlantic Treaty Organization
Perhaps the most recognized multinational body in the Western world is NATO. North Atlantic Treaty Organization nations and partner countries cooperate through NATO's Frequency Management SubCommittee (FMSC) to establish overarching policy for parts of the radio frequency spectrum used by the military.

One particular responsibility of the NATO Frequency Management Sub-Committee is establishing policy for the military management of the ultra high frequency band between 225 and 400 megahertz, widely used for military aircraft, naval and satellite communications.

Combined Communications-Electronics Board
The Combined Communications- Electronics Board (CCEB) is a five-nation (Australia, Canada, New Zealand, the United Kingdom and the United States) joint military communications-electronics organization whose mission is the coordination of military communicationselectronics matters among its member nations.

The CCEB routinely develops strategic plans that provide the roadmap to achieve future interoperability. Following the establishment of the CCEB, discussion and a vision to deliver battlewinning maritime command, control, communications and computer (C4) interoperability led to an effort to align naval communications policies and prevent any barriers to interoperability with the imminent introduction of sophisticated new communications equipment. The DON is involved in the CCEB to support continued coalition interoperability at sea.

Regional Bodies

Gulf Cooperation Council
The Gulf Cooperation Council (GCC) was established in 1981 between Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates as a regional common market and defense planning

council. The geographic proximity of these countries and their adoption of free trade economic policies are factors that encouraged them to establish the GCC.

In 1991, multilateral security commitments between the United Kingdom, the United States and Kuwait created a liaison relationship to the GCC. The extensive presence of United States Navy resources in the Persian Gulf necessitates that the DON support careful and continual coordination.

European Conference of Postal and Telecommunications Administrations (CEPT)
CEPT is acknowledged by the ITU-R as a composite representative of many European administrations. Bodies like CEPT are given special recognition and negotiation status during major ITU radio regulation conferences. While there is some CEPT membership overlap with NATO, not all CEPT members are NATO partners. The DON works as an adviser to many of the CEPT groups, developing regulatory proposals. Such proactive efforts attempt to mitigate serious disagreement at the final stages of radio regulation modification.

Organization of American States (OAS)
Similar to CEPT, the Organization of American States is a regional body with members from North, Central and South America. The OAS is represented at the ITU-R by its Inter-American Telecommunication Commission Permanent Consultative Committee for Radiocommunications and Broadcasting. The DON works closely with the OAS Inter-American Telecommunication Commission during preparatory meetings to resolve spectrum issues and to develop strategies and Inter-American proposals to formally liaise with other regions and introduce issues or proposals at ITU radio regulations conferences.

Technical and Standards Bodies

Spectrum-dependent technology can be leveraged for DON requirements or become a strident competitor for spectrum resources. The standards by which the systems operate are as critical to the DON as the international rules and regulations governing their use. The DON CIO maintains an active engagement in international standards bodies to manage the creation of specification standards that set the foundation for global technological evolution.

Institute of Electrical and Electronics Engineers (IEEE)
Long recognized as an active body that introduces various communication and computer-related concepts, the Institute of Electrical and Electronics Engineers is an avenue for the DON to influence early decisions on technology trends. A familiar wireless networking standard, 802.11, is an example of an IEEE standard. Areas such as the implementation of software defined radio and cognitive radio systems are immediate examples of recent DON influence and success.

International Organization for Standardization (ISO) The ISO is an independent group that encourages harmonization of best practice concepts from all regions and nations. Specifically, the global intermodal (ship, rail, truck and air) transfer of goods, which impacts the safety of U.S. harbors and airports, is a high priority interest. The DON CIO serves as an advocate for the adoption of standards that the ITU-R can support with spectrum allocations, and the International Maritime Organization can merge into its policies and procedures.

This is just a few of the international governance bodies in which the DON CIO engages to assure international treaties, standards, processes and regulations are favorable to naval operations while supporting the global electromagnetic environment. The DON CIO is a dynamic leader and trusted partner in various spectrum-related policy and strategy groups. The ability to deliver U.S. naval forces spectrum today and in the future is critically dependent upon these ongoing engagement efforts.

For more information about where the DON is engaged in support of Navy and Marine Corps operations, contact the DON Electromagnetic Spectrum Team at DONSpectrumTeam@navy.mil.

TAGS: Spectrum

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